

REMARKS

Claims 17-36 are pending in this application. Claims 30 and 35 are amended herein. Support for the amendments to the claims may be found in the claims as originally filed. Reconsideration is requested based on the foregoing amendment and the following remarks.

Objections to the Claims:

Claims 30, 31, and 32 were objected to for various informalities. Claim 30 was amended to depend from claim 17. Withdrawal of the objection is earnestly solicited.

Claim Rejections - 35 U.S.C. § 102:

Claims 17-20, 26-29, and 33-36 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 6,075,779 to Agarwal et al. (hereinafter "Agarwal"). The rejection is traversed to the extent it would apply to the claims as amended. Reconsideration is earnestly solicited.

In the claimed invention, a counting procedure is effected to determine whether radio bearers for multi-cast MBMS services, or individual radio bearers, are to be set up, as described at page 2, paragraph 2, continuing to page 3, paragraph 3, of the International Published Application. The goal of the claimed invention is thus not to receive acknowledgments from all potential user equipment, but to receive sufficient feedback information from the user equipment to decide on the type of radio bearers to be used.

It is more important to reduce the chance of collisions of these feedback transmissions than it is to receive all of them. Thus, in the claimed invention, the potential number of feedback transmissions is *reduced* at the beginning of a time interval in which random transmissions are affected by the user equipment, while the potential number of feedback transmissions is *increased* toward the end of the time interval. This is described, in particular, in connection with Figs. 6a and 6b. The second clause of claim 17, in particular, recites:

Determining a random delay time for user equipment to transmit a signal on an uplink access channel based upon a probability distribution that increases in density with increasing delay, the random delay time being determined by the user equipment.

The exponential function shown in Fig. 6b, although having an inverse slope to that shown in Fig. 6a, results in the same effect. In the claimed invention, only user equipment with a random number equal or greater to the value of $P(I)$ are allowed to transmit responses.

Consequently, the probability distribution increases in density with increasing delay in this case as well.

Agarwal neither teaches, discloses, nor suggests “determining a random delay time for user equipment to transmit a signal on an uplink access channel based upon a probability distribution that increases in density with increasing delay, the random delay time being determined by the user equipment,” as recited in claim 17. In Agarwal, rather, multiple random time delays are determined by a mobile-telephone, as shown in Fig. 3.

A first random time delay is determined based on a time delay parameter, i.e. Delay Time of Acknowledgment to Broadcast Teleservice Message (DTABTM), as described at column 4, lines 7 and 8. The DTABTM is received in a broadcast short message from the base station, multiplied with a random number between zero and one generated by the mobile-telephone, as described at column 5, lines 41-48. A third random delay is defined as a time interval between 0 and 30 blocks, with a granularity of six blocks.

Agarwal does not, however, describe how the mobile-telephone determines exactly which time interval it should use as the third random time delay. The first and third time delays described in Agarwal, thus, seemed to be determined using different principles. The aim of the time delays in Agarwal, however, is always to reduce collisions among acknowledging mobile telephones by distributing acknowledgment transmissions over time, as described at column 2, lines 19-22. Thus, Agarwal seeks to ideally arrive at an *even* distribution of these acknowledgment transmissions over time, instead of “determining a random delay time for user equipment to transmit a signal on an uplink access channel based upon a probability distribution that increases in density with increasing delay,” as recited in claim 17.

Agarwal, moreover, determines the duration of the random delay period with a *random* number generator, instead of “a probability distribution that increases in density with increasing delay,” as recited in claim 17. In particular, as described at column 2, lines 28-31:

The time delay parameter is used by the mobile-telephone in conjunction with the output of a random number generator to determine the duration of a random delay period.

Since Agarwal determines the duration of the random delay period with a random number generator, Agarwal is not “determining a random delay time for user equipment to transmit a signal on an uplink access channel based upon a probability distribution that increases in density

with increasing delay,” as recited in claim 17.

Agarwal, moreover, determines a *random* delay period for the mobile-telephone to transmit a BSM acknowledgment, instead of “a probability distribution that increases in density with increasing delay,” as recited in claim 17. In particular, as described at column 5, lines 29-33:

The DTABTM is a time delay parameter, e.g., twenty minutes, which is multiplied by a random number generated by the mobile-telephone to determine a random delay period for the mobile-telephone to transmit a BSM acknowledgment.

Since Agarwal determines a random delay period for the mobile-telephone to transmit a BSM acknowledgment, Agarwal is not “determining a random delay time for user equipment to transmit a signal on an uplink access channel based upon a probability distribution that increases in density with increasing delay,” as recited in claim 17. Claim 17 is submitted to be allowable. Withdrawal of the rejection of claim 17 is earnestly solicited.

Claims 18, 19, 20, and 26-29 depend from claim 17 and add further distinguishing elements. Claims 18, 19, 20, and 26-29 are thus also submitted to be allowable. Withdrawal of the rejection of claims 18, 19, 20, and 26-29 is also earnestly solicited.

Claims 33 and 34:

The third clause of claim 33 recites:

Using the time variable information to determine delay times for transmitting signals on an uplink access channel from the user equipment, the time variable information varying based upon a probability distribution which increases in density with increasing time.

Agarwal neither teaches, discloses, nor suggests “using the time variable information to determine delay times for transmitting signals on an uplink access channel from the user equipment, the time variable information varying based upon a probability distribution which increases in density with increasing time,” as discussed above with respect to the rejection of claim 17. Claim 33 is thus submitted to be allowable, for at least those reasons discussed above with respect to the rejection of claim 17. Withdrawal of the rejection of claim 33 is earnestly solicited.

Claim 34 depends from claim 33 and adds further distinguishing elements. Claim 34 is thus submitted to be allowable as well. Withdrawal of the rejection of claim 34 is earnestly solicited.

Claim 35:

The second clause of claim 35 recites:

A transmitter to transmit a time variable information in downlink to user equipment located in an area covered by the base station, wherein the information is used in the user equipment to determine delay times for transmitting signals on an uplink access channel and wherein the information varies based upon a probability distribution which increases in density with increasing time.

Agarwal neither teaches, discloses, nor suggests "a transmitter to transmit a time variable information in downlink to user equipment located in an area covered by the base station, wherein the information is used in the user equipment to determine delay times for transmitting signals on an uplink access channel and wherein the information varies based upon a probability distribution which increases in density with increasing time," as discussed above with respect to the rejection of claim 17. Claim 35 is thus submitted to be allowable as well, for at least those reasons discussed above with respect to the rejection of claim 17. Withdrawal of the rejection of claim 35 is earnestly solicited.

Claim 36:

Claim 36 recites:

Comprising a calculation unit to determine a delay time for transmitting a signal on an uplink access channel, wherein the delay time is randomly determined based upon a probability distribution that increases in density with increasing delay.

Agarwal neither teaches, discloses, nor suggests "comprising a calculation unit to determine a delay time for transmitting a signal on an uplink access channel, wherein the delay time is randomly determined based upon a probability distribution that increases in density with increasing delay," as discussed above with respect to the rejection of claims 17. Claim 36 is thus submitted to be allowable as well, for at least those reasons discussed above with respect to the rejection of claim 17. Withdrawal of the rejection of claim 36 is earnestly solicited.

Allowable Subject Matter:

The Applicant acknowledges with appreciation the indication that claims 21-25 contain allowable subject matter.

Conclusion:

Accordingly, in view of the reasons given above, it is submitted that all of claims 17-36

Application Serial No. 10/534,380
Amendment filed September 15, 2008
Reply to Office Action mailed April 15, 2008

are allowable over the cited references. Allowance of all claims 17-36 and of this entire application is therefore respectfully requested.

Finally, if there are any formal matters remaining after this response, the Examiner is invited to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: September 15, 2008

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